

**Title: Apparatus, Systems and Methods for  
Packet Based Transmission of Multiple Data Signals**

**Abstract**

5 Apparatus, systems and methods for receiving one or more input signals and providing output signals in various video, audio, data and mixed formats are described. One or more input processors receive the input signals. Each of the input processors provides one or more packetized signals corresponding to one or more of the input signals received at the input processor. Each output processor can receive  
10 one or more packetized signals and generates one or more output signals. The output signals correspond to one or more the input signals, additional locally generated signals or data relating to the signals or any combination of such signals. The input processor can incorporate signal processors to process the input signals to provide versions of the input signals or to generate data about the input signals and  
15 for other purposes. The output processor may similarly incorporate signal processor to process signal received as part of the packetized signal. Use of a packet router according to the invention allows signals encoded with one set of packetized signals to be recombined to provide additional packetized signals incorporating the same or different combinations of signals.